



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,096	03/13/2001	Gijsbert Joseph Van Den Enden	PHN 17,551	1082
24737	7590	12/11/2003	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS			AGUSTIN, PETER VINCENT	
P.O. BOX 3001			ART UNIT	PAPER NUMBER
BRIARCLIFF MANOR, NY 10510			2652	
DATE MAILED: 12/11/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/787,096	VAN DEN ENDEN, GIJSBERT JOSEPH
	Examiner Peter Vincent M Agustin	Art Unit 2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on \_\_\_\_.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-17 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-16 is/are rejected.  
 7) Claim(s) 17 is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 3/13/01 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.  
 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.  
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) The translation of the foreign language provisional application has been received.  
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.	6) <input type="checkbox"/> Other: ____.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because Figure 2 lacks descriptive labels on elements 21, 22 and 25. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because there are no appropriate subheadings for each section of the specification, e.g., "Background of the Invention" on page 1. Appropriate correction is required.

### ***Claim Objections***

3. Claim 17 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 17 drawn to a recording device is improperly dependent on claim 16, drawn to a method. Further, specifying a "control unit" as carrying out a method does not recite what are the actual functions of the "control unit". Claim 17 is otherwise not considered on the merits.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Base claims 1 and 13 are method claims lacking positively recited method steps, rather the claims merely recite desired results. Applicant should use positively recited steps such as "following", "monitoring", "deciding", "rating" to clearly recite what is the method. Claims 1-16 recite desired results, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 1-16 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

6. Claims 3-12 and 15-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033

(Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 5 and 9 recite the broad recitation "examining integrity", and the claims also recite "preferably by means of a method as claimed in claim 1" which is the narrower statement of the range/limitation. Similarly, claim 3 refers to a "fraction" and then "preferably equal to approximately 0.5", claims 4 and 16 refer to "50  $\mu$ s to approximately 75  $\mu$ s" and then "preferably approximately 60  $\mu$ s", claims 6 and 10 refer to "a predetermined number" and then "preferably equal to approximately 50", claims 8 and 11 refer to "information" and then "particularly real time video", claims 8 and 11 refer to "recorded carrier of the type having a multitude of concentric substantially circular recording tracks" and then "particularly a DVR disc", claim 15 refers to "fraction" and then "preferably equal to approximately 2/3". Hence, the scope of coverage of the claimed invention is unclear. See MPEP § 2173.05(d).

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 4 and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not disclose information regarding the numerical range of the "predetermined period of time" described in claims 4 and 16.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-4 and 13-16 are rejected under 35 U.S.C. 102(b) as anticipated by Takasago et al.

Takasago et al. discloses monitoring a tracking signal and rating a track (claim 1) or deciding continuing recording (claim 13) in figures 1-3, column 2, lines 32-53 and column 3, lines 28-44. Note figure 1, elements 17-18 and 22-24 for use of predetermined threshold for time period (claims 2 and 14). Note figure 3 for nominal tracking signal value and use of approximately 0.5 of maximum value (claims 3 and 15). Note figure 3 for specific time period of claims 4 and 16.

11. Claims 1, 5, 6, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsuchiya et al.

Tsuchiya et al. in the defect checking art, discloses all the subject matter in claim 1. Line 3 of the abstract constitution speaks of a tracking error signal that denotes the presence of a defect.

Tsuchiya et al. in the defect checking art, discloses a method of checking an optical disk for defects (see abstract: purpose and constitution). The second line of the purpose mentions “scanning information tracks for every specified tracks in a skipping mode”, which corresponds to “examining the integrity of predetermined test tracks” of claims 5 and 9. The fifth line of the purpose mentions “rechecking all the tracks before and after the position where the defect has occurred”, which corresponds to “examining the integrity of tracks adjacent the relevant test track” of claims 5 and 9. The fourth line of the constitution reads “when an error whose magnitude of the defect exceeds  $W_C$  in a defect detecting circuit, the error is stored in a defect-position information memory circuit”, which corresponds to “entering the relevant tracks in a defect list each time that the number (X) thus determined in the step (b) is greater than a predetermined threshold value (M)” and “storing the defect list in a memory” of claims 5 and 9. Thus, this reference teaches all the elements of claims 5 and 9.

Line 7 of the constitution states “the step is jumped into the next track” and “this procedure is repeated”, which appear to correspond to “each time a predetermined number of tracks between successive test tracks is skipped” of claims 6 and 10. The phrase “next track” appears to imply that only one track is skipped, but when viewed in

conjunction with "the unchecked tracks before and after the defective tracks" in line 10 of the constitution, inherently suggests that a number of tracks is to be skipped, as required by claims 6 and 10.

12. Claims 1 and 5-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Sasaki et al.

Sasaki et al. discloses a method of examining a recording track for defects and rating a recording track based on the tracking signal (claim 1) on figures 2 and 19 and column 6, lines 12-50. Figures 1A-1C, 2, and 3B and column 7 line 22 thru column 8 line 13 disclose examining tracks, examining adjacent tracks, and a memory defect list (claims 5 and 9), skipping to the next track (claims 6 and 10), recording the defect list on the disk (claim 7) and skipping defective tracks during recording (claim 8).

#### ***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchiya as applied to claim 6 above, and further in view of Hosoya.

Tsuchiya in the optical disk recording art, discloses all the claimed features as noted in the 102 rejection above, but does not disclose "defect list is recorded on the

examined record carrier" (claim 7) and "recording tracks included in said defect list being skipped in the recording process" (claim 8)

Hosoya in the optical disk recording art (see column 6, lines 22-25 and figure 7, step 108) shows a box within the flowchart stating "record defective sector information on optical disc". It would have been obvious to one of ordinary skill in the art at the time of invention to add step 108 to the method of Tsuchiya in order to provide convenient non-volatile retrieval of which tracks are usable for recording.

Column 2, lines 64-68 states that all defective sectors are detected prior to recording and sectors free from defects are subjected to recording in accordance with the detected defective sector information. This satisfies "the recording tracks included in said defect list being skipped in the recording process" of claim 8. It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teachings of Hosoya to the method of Tsuchiya in order to eliminate wasteful recording on unrecordable tracks.

### ***Conclusion***

15. The following prior arts made of record and not relied upon are considered pertinent to applicant's disclosure.

Nakane et al. disclose a method of managing defects in an optical disk. Defects are classified as primary (occurring at the time of manufacture) and secondary (occurring after disk has been used). Primary defects are determined by a first criteria and secondary defects such as scratches and thumbprints are determined by a second criteria which is less strict than the first criteria. The addresses of the sectors affected by

primary defects are stored in a primary defect list (similar to that mentioned in claims 5 and 9). These sectors are replaced by succeeding non-defective sectors and skipped during recording. Secondary defects are considered minor and sector replacement is not performed unless the secondary defects cause a noticeable effect on the output signal. The present invention discloses a similar scheme of classifying defects and deciding whether a defect is tolerable. For the present invention, the tolerance is based on the size of the defect. Large spot defects are considered unacceptable, and therefore, skipped during recording, while small defects are simply ignored.

Kamiyama discloses a defect detection apparatus that includes a photodetector that detects defects based on phase detection signals derived from the output of the photodetector and a tracking servo means for generating a tracking error signal based on the phase detection signals. It is an object of Kamiyama's invention to differentiate between defect detection and tracking error detection. In the present invention however, the track is rated as defective or non-defective on the basis of the tracking signal.

Takahashi discloses a method of replacing defective blocks with non-defective blocks, similar to that described in Sasaki et al. above. During recording, the defective blocks are skipped and data are recorded only in non-defective blocks. The positions of the defective blocks are stored in a defect list. A defect is considered significant if not less than three successive defective sectors are found within a block. In the present invention, a defect is considered large when the number of tracks affected by a spot defect exceeds a predetermined limit.

Obata ('085) discloses a method for identifying and skipping defective sections. This method is very similar to that described by Sasaki and Takahashi. Defects are detected by sensing turbulence in an error signal and defects are rated as such if said turbulence exceeds a predetermined amount. In the present invention, the predetermined amount is a certain fraction of the maximum possible value of the tracking error signal which value is based on the maximum deviation from the center of the track.

Obata et al. ('804) disclose a method of detecting defects similar to that described by Nakane et al. above. The invention includes a detector for detecting a first type of defect that takes place during fabrication, and a second type of defect such as fingerprints.

Shoji et al. disclose a scanning beam control system embodied in a tracking apparatus that produces a tracking error signal representative of the deviation from the center line of a selected track, similar to that described in claim 3 of the present invention.

Miyasaka, as admitted in the present invention, discloses a read-after-write method, wherein it is checked whether the written data is properly recorded. Information is prevented from being recorded on portions of the disk containing foreign matter, scratches, or any other errors that disable accurate reproduction of data. Information is written on another portion of the disk when such errors are detected.

Asthana, as admitted in the present invention, discloses a method of reallocation of defective recording areas on a disk. This reference provides a method similar to the

read-after-write method of Miyasaka; however, information is written on an area immediately following the originally recorded data when an error is detected.

Kiguchi, as admitted in the present invention, discloses an apparatus that detects defects from a disk prior to recording, and during recording avoids recording of data on defective tracks, similar to the recording method described by claim 8 of the present invention.

Yamamuro, as admitted in the present invention, discloses a method of examining for defects, wherein dummy data is reproduced to determine which sectors are defective, addresses of defective sectors are written to the disk, the defect list is read prior to recording, defective sectors are considered unusable, and therefore skipped during recording. This reference guarantees continuous and uninterrupted recording, which is desirable for applications requiring real-time recording.

***Allowable Subject Matter***

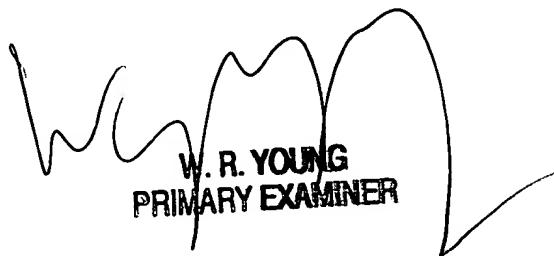
16. Claims 11 and 12 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

As noted in the 103 rejection applied to claim 8 above, Hosoya discloses all the claimed features “providing a defect list of tracks” and skipping the tracks in the defect list during recording of claim 8, which features are also present in claim 11. However, no prior art of record alone or in combination discloses or suggests the claimed features “reference is made to the tracks situated in a suspect area at opposite sides of the relevant test tracks”, “examining the integrity of the tracks in said suspect areas”, and

"entering the relevant tracks in a secondary defect list each time a number of tracks affected by a defect is greater than a predetermined threshold value" of claim 11.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent M. Agustin whose telephone number is (703) 305-8980. The examiner can normally be reached on Monday thru Friday 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



W. R. YOUNG  
PRIMARY EXAMINER